

- 10 -

CLAIMS

1. Method for treating a textile yarn, characterized in that said yarn is subject to mechanical surface processing.
2. Method according to Claim 1, characterized in that said surface processing is an abrasive processing.
3. Method according to Claim 1, comprising the following steps:
  - forming a synthetic yarn comprising a plurality of continuous strands or filaments;
  - subjecting said yarn to said mechanical surface processing to break at least one of said continuous strands or filaments and to form a plurality of discontinuous fibers projecting from the yarn.
4. Method according to Claim 3, characterized in that said synthetic yarn is an air-textured yarn.
5. Method according to one or more of the preceding claims, characterized by the following steps:
  - forming a composite synthetic yarn comprising: (a) a multi-strand thread with continuous strands or filaments forming a core; and (b) a multi-strand effect thread with continuous strands or filaments, joined by air texturing to said core;
  - subjecting said composite synthetic yarn to said mechanical surface processing which interrupts the continuity of at least some of the continuous strands or filaments forming the effect thread.
6. Method according to one or more of the preceding claims, characterized in that said yarn is subjected to stretching and said mechanical surface processing is carried out in an area of the yarn subjected to stretching.
7. Method according to Claim 6, characterized in that said yarn is subjected to a stretch in the range from 3% to 6%, and preferably from 4% to 5%.
8. Method according to one or more of the preceding claims, characterized in that said mechanical surface processing is carried out by means of a grinder rotating about an axis of rotation.

- 11 -

9. Method according to Claim 8, characterized in that said yarn is guided in such a way as to contact said grinder along a line which is inclined with respect to said axis of rotation of the grinder.

10. Method according to Claim 8 or 9, characterized in that said 5 grinder has a conical shape.

11. Device for producing a yarn, comprising a path for said yarn, characterized by at least one element for mechanical surface processing of the yarn, arranged along said path and carrying out mechanical surface processing on said yarn.

10 12. Device according to Claim 11, characterized in that said mechanical processing element is an abrasion element.

13. Device according to Claim 11 or 12, characterized in that it comprises stretching elements, which impart a stretch to said yarn along a portion of said feed path, said at least one mechanical processing element 15 acting on the yarn along said portion of the path in which the yarn is subjected to stretching.

14. Device according to Claim 11 or 12 or 13, characterized by an air-texturing system located upstream of the mechanical processing element, said yarn being an air-textured yarn comprising at least one continuous strand 20 or filament, whose continuity is interrupted by said mechanical processing element.

15. Device according to Claim 14, characterized in that said air-texturing system comprises at least one texturing nozzle, fed with at least two continuous yarns, each consisting of a plurality of continuous strands or 25 filaments.

16. Device according to one or more of Claims 11 to 15, characterized in that it comprises two rollers positioned along said path of the yarn, around which turns of said yarn are wound, the peripheral velocities of said two rollers being different from each other in order to impart 30 a stretch to said yarn, said mechanical processing element being positioned between said two rollers.

17. Device according to one or more of Claims 11 to 16,

- 12 -

characterized in that said mechanical processing element is associated with a suction system for sucking out the residues generated by the abrasive processing.

18. Device according to one or more of Claims 11 to 17,  
5 characterized in that said mechanical processing element is a grinder rotating about an axis of rotation.

19. Device according to Claim 18, characterized by two yarn guides located upstream and downstream of the grinder along the yarn path.

20. Device according to Claim 19, characterized in that said yarn  
10 guides are staggered with respect to each other to position the yarn in contact with said grinder along a line which is inclined with respect to the axis of rotation of the grinder.

21. Device according to Claim 18, 19 or 20, characterized in that said grinder is a conical grinder.

15 22. Textile yarn comprising fibers formed by the breaking of longer filaments by mechanical processing.

23. Yarn according to Claim 22, characterized in that it consists at least partially of synthetic filaments.

24. Yarn according to Claim 23, characterized in that it comprises a  
20 plurality of continuous synthetic strands or filaments, and in that said fibers are formed by the breaking of at least some of said continuous filaments by mechanical processing.

25. Yarn according to Claim 24, characterized in that it is an air-textured yarn.

26. Yarn according to Claim 25, characterized in that it comprises a  
25 core formed from continuous strands or filaments and by an effect yarn interlaced to said core, formed from continuous strands or filaments, at least some of which are interrupted by mechanical processing.